Technical Architecture

for VentureVortex.com v2.0 Establish

prepared for

VentureVortex

October 31, 2000

Groundswell

Executive Summary

The Technical Architecture provides a high-level view of the systems and infrastructure that will compose the entire system necessary for the completion of the project. This includes both hardware and software requirements.

The first section of the document explains the existing architecture. The next section documents the strategy and architecture that will be used for the current phase of the project.

Existing Architecture

The existing architecture is housed and administered by the ISP VirtualScape. It consists entirely of Microsoft-based technologies including Microsoft Windows NT Server, Microsoft SQL Server and the NT version of Allaire ColdFusion Application Server.

Two servers compose the production system, one as the web server and one as the database server. External systems include the NewMediary website which is accessed via HTML anchors on the VentureVortex site.

The development environment is housed in VentureVortex's New York offices and is administered by them. It consists of one Windows NT Server with all of the necessary application servers installed on it.

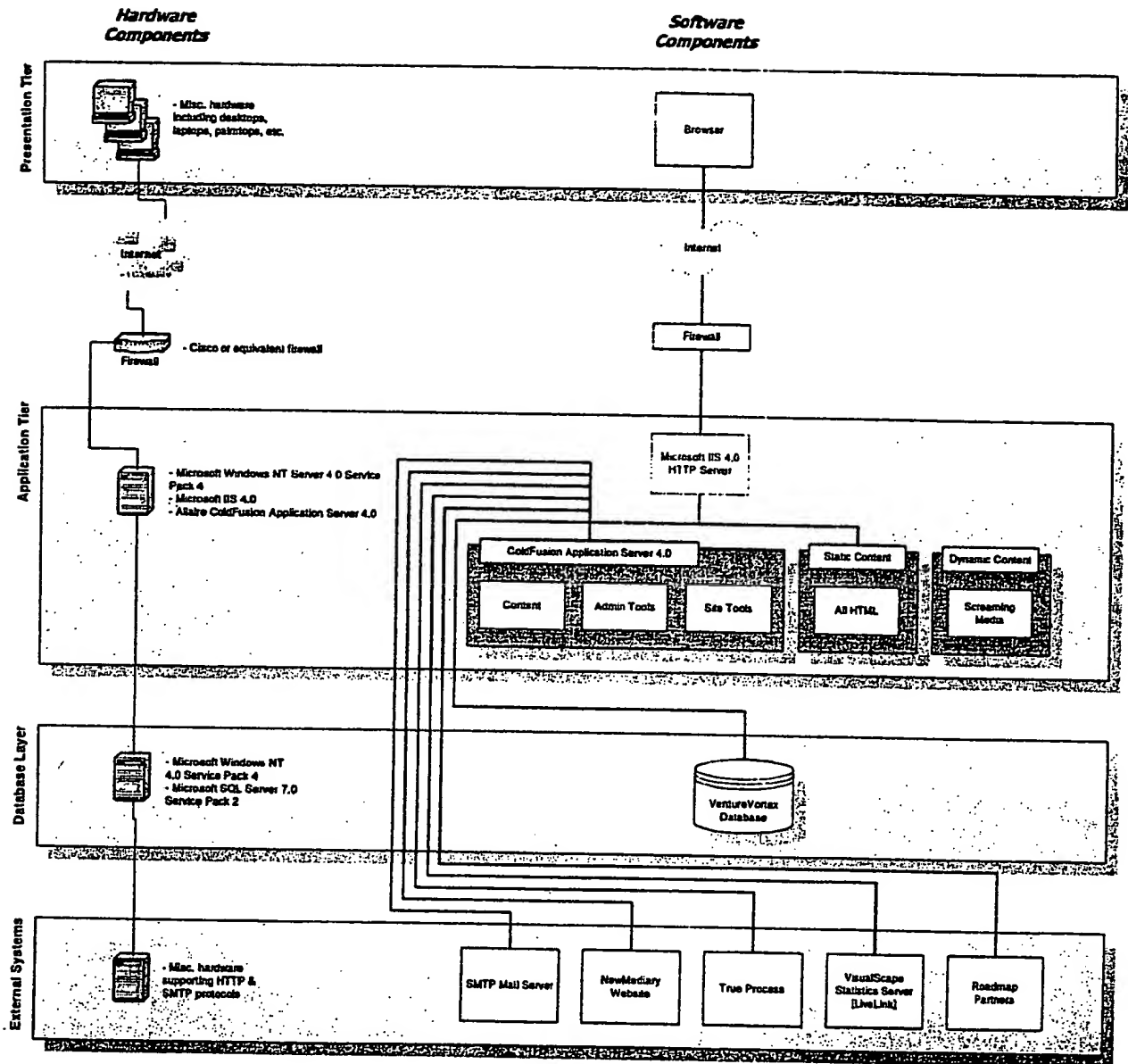The following diagram articulates the existing production system.

Hardware Components

Software Components

Presentation Tier

- Misc. hardware including desktops, laptops, palmtops, etc.

Browser

Internet

Internet

- Cisco or equivalent firewall

Firewall

Firewall

Application Tier

- Microsoft Windows NT Server 4.0 Service Pack 4
- Microsoft IIS 4.0
- Allaire ColdFusion Application Server 4.0

Microsoft IIS 4.0 HTTP Server

ColdFusion Application Server 4.0

| Content | Admin Tools | Site Tools |

Static Content

All HTML

Dynamic Content

Streaming Media

Database Layer

- Microsoft Windows NT 4.0 Service Pack 4
- Microsoft SQL Server 7.0 Service Pack 2

VentureVortex Database

External Systems

- Misc. hardware supporting HTTP & SMTP protocols

| SMTP Mail Server | NewMediary Website | True Process | VisualScape Statistics Server [LiveLink] | Roadmap Partners |

Diagram 1.0

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Equipment	Component	Description
Web/Database Server	Server Hardware	650MHZ Dual CPU 1GB RAM RAID 1 Disk Array (disk mirroring) Shared w/ other sites
	Operating System	Microsoft Windows NT Server 4.0 Service Pack 4
	Web Server	Microsoft IIS 4.0
	Application Server	Allaire Coldfusion Application Server 4.0
	Database Server	Microsoft SQL Server 7.0
Mail Server	Server Hardware	Not Determined
	SMTP Mail Server	VirtualScape POP3/SMTP Server
	POP3 Mail Server	VirtualScape POP3/SMTP Server
Network Infrastructure	Firewall	Cisco equivalent
	Ethernet	100MB

Proposed Architecture

The proposed architecture includes all software and hardware systems that will compose the completed system for this project. The proposed system draws upon the existing architecture, the functional requirements and the technical requirements to fulfill all of the project requirements.

Groundswell intends to leverage the existing investment VentureVortex has made in ColdFusion and extend its codebase in ColdFusion where appropriate. As much of the existing code as possible will be integrated into the new version; where it is not feasible or efficient to do so, it will be re-written to provide as least as much functionality as the current version.

Based on the Software Selection Process the eRoom Server has been chosen for the collaboration portions of the project. Heavy interaction will occur between the custom modules written in ColdFusion and eRoom's native functionality. This will require extensive use of the eRoom SAAPI and SEAPI API's and customization of the eRoom thin-client UI. This thin-client UI is written entirely in ASP and is customizable. The thick-client UI requires a browser plug-in that is completely uncustomizable as well as not supported on Macintosh systems. We therefore propose that the thick-client UI is disabled and only the thin-client UI is used. This will allow us to customize the eRoom UI where necessary and provide a consistent interface to all users of the site.

The technical requirements of the site will necessitate a departure from a shared-server model at an ISP and to a co-located model. In this model VentureVortex will either purchase or lease equipment from an ISP and will have complete control of this hardware. This will allow VentureVortex to satisfy the requirements stated in the Technical Requirements as well as allow for future hardware upgrades for scalability. Specific hardware requirements for the servers will not be determined until the build is completed. At this time we can undergo performance tests on the actual developed system and determine optimum specific hardware requirements.

All major components and modules are shown on the diagram.

Diagram 2.0

Development Environment

Equipment	Component	Description
Web/Database Server	Server Hardware	Dell 4300 550MHZ Dual Pentium III (Katmai) CPU 1GB RAM 2x9GB RAID 0 (System OS, Applications) 4x18GB RAID 5 (Data)
	Operating System	Microsoft Windows NT Server 4.0 Service Pack 6a
	Web Server	Microsoft IIS 4.0
	Application Server	Allaire Coldfusion Application Server 4.5
	Application Server	eRoom Server 4.2
	Application Server	eRoom API 4.2
	Database Server	Microsoft SQL Server 7.0 Service Pack 2
Mail Server	Server Hardware	Not Determined
	SMTP Mail Server	Groundswell SMTP/POP3 Server
	POP3 Mail Server	Groundswell SMTP/POP3 Server
Network Infrastructure	Firewall	Cisco equivalent
	Ethernet	100MB
	Encryption	SSL 128-bit

Proposed Equipment/Software

Equipment	Component	Description
Web/Database Server	Server Hardware	Approximation: 1000MHZ Dual Pentium III CPU 2GB RAM 2x9GB RAID 0 (System OS, Applications) 4x60GB RAID 5 (Data)
	Operating System	Microsoft Windows NT Server 4.0 Service Pack 6
	Web Server	Microsoft IIS 4.0
	Application Server	Allaire Coldfusion Application Server 4.5
	Application Server	eRoom Server 4.2
	Application Server	eRoom API 4.2
Database Server	Server Hardware	Approximation: 850MHZ Dual Pentium III CPU 1GB RAM 2x9GB RAID 0 (System OS, Applications) 3x18GB RAID 5 (Data)
	Database Server	Microsoft SQL Server 7.0 Service Pack 2

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Mail Server	Server Hardware	Not Determined
	SMTP Mail Server	ISP POP3/SMTP Server
	POP3 Mail Server	ISP POP3/SMTP Server
Network Infrastructure	Firewall	Cisco equivalent w/ port-specific subnet-restriction ability
	Ethernet	100MB

Supporting Documents

Subject	Document Title	Location
Architecture	Business Flows	Portal
	Statement of Work	Portal
	Content Inventory	Portal
	Technical Requirements	Portal
	Technical Interview 8/8/2000	W Scoping Portal